UNIVERSITY OF VIRGINIA
THE COLGATE DARDEN GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
Tayloe Murphy Institute

Virginia Gross State Product, 1958-1981

David C. Hodge

Gross state product (GSP) is an estimate of the value of all goods and services produced in the state in one year. For purposes of comparison, GSP may be regarded as the state equivalent of gross national product (GNP). The figures in this report supersede those published in earlier reports of the Tayloe Murphy Institute.

In current dollars (unadjusted for inflation), Virginia GSP rose from $8.2 billion in 1958 to $63.8 billion in 1981 (see Table 1). Average annual growth over the period was 9.6 percent.

Real Virginia GSP (gross state product converted to 1972 dollars of constant purchasing power) grew from $13.0 billion in 1958 to $33.1 billion in 1981 (see Table 2 and Figure 1). Average annual growth over the entire period was 4.3 percent.[1/] There were only two actual declines in real GSP over the twenty-three year period, an almost imperceptible decline from 1969 to 1970 and a drop of 1.9 percent from 1974 to 1975. (There were increases of less than 1 percent from 1959 to 1960 and from 1979 to 1980.) At the national level, real GNP declined in 1969-70, 1973-75, and 1979-80. Recognized national recessions occurred in all three periods.

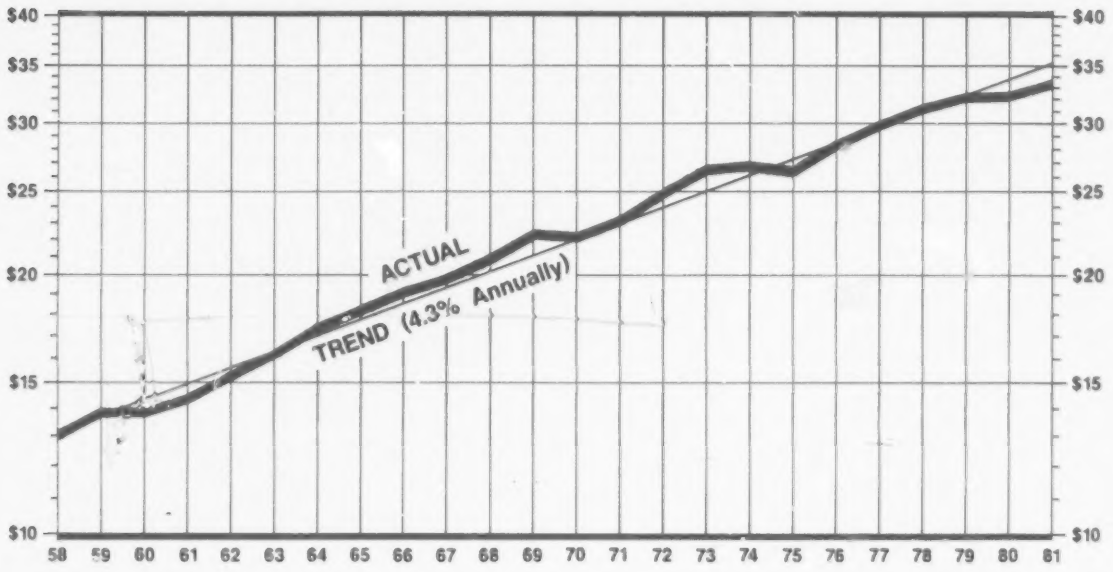
When the data are broken into three sub-periods, a marked slowdown in Virginia's real growth becomes apparent. In the most recent period, 1974-81, real GSP rose by 3.5 percent annually versus 5.0 percent for 1958-66 and 4.5 percent for 1966-74. In each of the three periods the state's real growth exceeded that of the nation, with the greatest difference in the middle period that included the stimulative effects of the Vietnam War.

	Average Annual Change (%)		
	Virginia Real GSP	Real GNP	Ratio of Real GSP to Real GNP
1958-66	5.0	4.6	1.09:1
1966-74	4.5	3.1	1.45:1
1974-81	3.5	3.2	1.09:1

Virginia's current dollar GSP as a percent of GNP is shown in Table 3. Total GSP rose from 1.83 percent of GNP in 1958 to 2.17 percent in 1981. In recent years the state failed to make any significant gain in its share of GNP

1/ This and other growth rates in the study were computed using the least squares method.

Figure 1.
Virginia Gross State Product, 1958-1981 (billions of 1972 dollars)

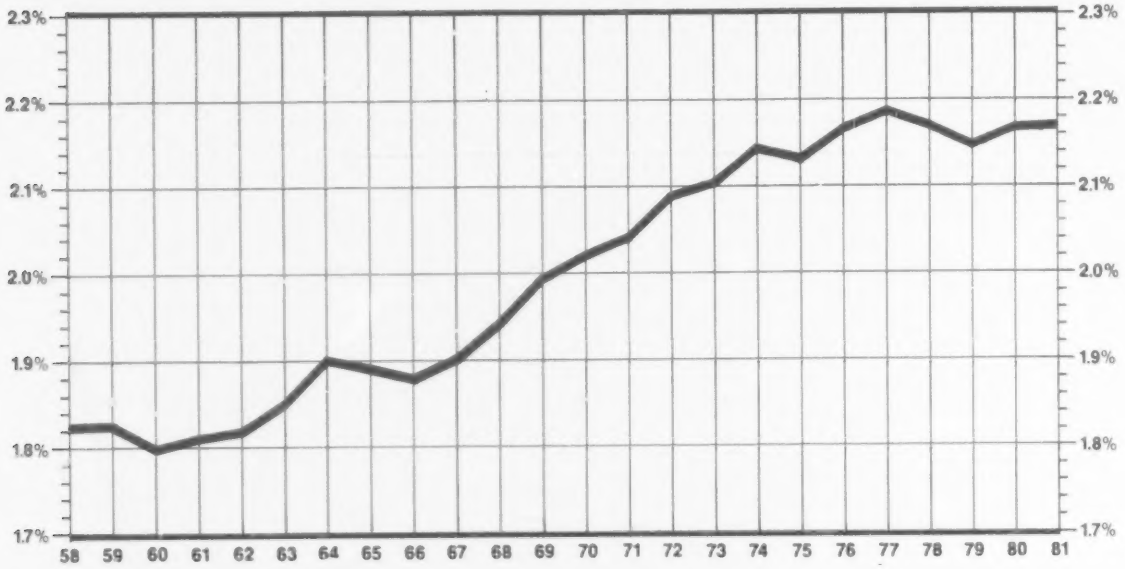


(see Figure 2). Component series were more variable. Farming in Virginia actually fell as a percent of U.S. farming, from 1.85 percent to 1.35 percent in 1981. Construction rose from 1.81 percent to 2.57 percent by 1974, then fell to 2.15 percent by 1981. Finance, insurance, and real estate had a high point of 1.89 percent in 1977 and 1978. Mining was at its highest, as a percentage of the U.S. total, in 1975. The other six component series reached their highest share of national counterparts in 1981: federal government (7.09 percent of the national total), state and local government (2.25 percent), manufacturing (2.00 percent), services (2.10 percent), trade (1.99 percent), and transportation and public utilities (2.13 percent).

Among industrial components of real Virginia GSP, manufacturing rose from 18.0 percent of the total in 1958 to 21.7 percent in 1981 (derived from Table 2); trade from 13.0 percent to 15.0 percent; finance, insurance, and real estate from 10.8 percent to 12.7 percent; transportation and public utilities from 7.6 percent to 9.1 percent; services and other industries from 11.0 percent to 14.2 percent; and state and local government from 6.8 percent to 8.0 percent. The industrial sectors that decreased their shares of real GSP over the same period were mining (1.3 to 1.0 percent), construction (5.9 to 3.4 percent), federal government (21.7 to 12.7 percent), and farming (3.9 to 1.8 percent).

In current dollars, the industrial divisions that grew faster than the state annual average of 9.6 percent (derived from Table 1) were state and local government, 12.0 percent; mining, 11.5 percent; services, 11.4 percent; finance, insurance, and real estate, 9.9 percent; and construction and trade, 9.7 percent each. The slower growing sectors were transportation and public utilities, which grew by 9.0 percent, federal government by 8.7 percent, manufacturing by 8.6 percent, and farming by 4.7 percent.

Figure 2.
Virginia GSP in Current Dollars as a Percent of GNP, 1958-1981



Virginia GSP per capita (current dollars) grew from $2,096 in 1958 to $11,740 in 1981, while current dollar GNP per capita grew from $2,582 to $12,811 (see Table 4). Virginia GSP per capita as a percent of GNP per capita (both current dollar and real) was in the low to mid 80's until the late 1960's. Then after a substantial gain, it has remained in the low 90's for the last decade.

Gross farm product, a component of Virginia gross state product, is derived from the U.S. Department of Agriculture's state farm income statistics for Virginia. This is accomplished by subtracting intermediate production expenses from the value of total farm output. Government payments are omitted from the value of farm output. In addition, farm wages are not included as production expenses and therefore are considered part of gross state product. The following table illustrates the computation of Virginia gross farm product for 1981 (current dollars).

	Millions of Dollars
Value of total farm output	
Cash receipts from marketings	1,643.6
Nonmonetary income	286.9
Other farm income	23.4
Net change in inventories	119.9
Subtotal	2,073.8
Less: Intermediate production expenses	
Feed	254.8
Livestock, purchased	47.3
Seed, plants, and bulbs	46.9
Fertilizer and lime	145.3
Repairs and operations of capital items	273.4
Miscellaneous operating expenses	283.3
Subtotal	1,051.0
Gross farm product	1,022.8

Most of the estimates of Virginia gross state product presented in this report for years prior to 1981 are revised from the previous report. The extensive changes in GSP are the result of: 1) revisions in estimates of earnings and national income by industry by the U.S. Department of Commerce, Bureau of Economic Analysis; 2) adjustments in farm income components by the U.S. Department of Agriculture, Economic Research Service; and 3) changes in methodology by the author. A revised statement of methodology is available on request.

Table 1.
Virginia Gross State Product in Current Dollars, 1958-1981 (millions of current dollars)

Year	Total	Construction	Farming	Finance, Insurance, and Real Estate	Government, Federal	Government, State and Local	Manufacturing	Mining	Services[a/]	Trade	Transportation and Public Utilities
1958	8,205.2	380.4	382.6	939.7	1,268.8	425.4	1,891.8	165.5	797.7	1,178.9	774.4
1959	8,907.2	413.6	326.9	1,011.3	1,356.5	453.4	2,147.0	173.3	878.3	1,302.1	844.8
1960	9,107.8	421.8	347.9	1,068.8	1,300.3	494.8	2,156.2	175.4	923.9	1,341.7	877.0
1961	9,496.7	465.3	353.4	1,125.1	1,360.8	536.5	2,228.8	173.5	966.8	1,392.5	894.0
1962	10,277.0	518.1	353.5	1,217.3	1,442.7	593.5	2,471.3	179.0	1,057.9	1,498.8	944.9
1963	11,041.1	593.5	269.9	1,345.3	1,621.8	647.4	2,606.2	193.5	1,166.5	1,588.9	1,008.1
1964	12,122.5	650.9	355.2	1,451.0	1,783.7	721.9	2,847.9	198.9	1,282.1	1,756.5	1,074.4
1965	13,060.0	727.0	353.6	1,567.7	1,843.5	804.9	3,108.4	194.4	1,387.4	1,912.0	1,161.1
1966	14,202.7	768.5	306.9	1,710.5	2,100.3	919.3	3,366.5	203.8	1,522.0	2,051.9	1,253.0
1967	15,209.3	772.9	355.6	1,825.8	2,367.8	1,021.4	3,471.8	212.2	1,654.1	2,205.6	1,322.1
1968	16,958.7	851.3	337.3	1,991.5	2,693.8	1,197.3	3,929.1	235.1	1,829.9	2,468.3	1,425.1
1969	18,809.5	953.8	373.8	2,195.5	3,264.3	1,367.9	4,087.0	257.6	2,046.4	2,733.1	1,530.1
1970	20,049.5	1,057.4	383.8	2,345.7	3,298.3	1,543.1	4,173.9	356.3	2,263.6	2,941.8	1,685.6
1971	21,992.3	1,189.9	381.4	2,642.8	3,557.0	1,670.2	4,516.4	362.1	2,508.1	3,280.1	1,884.3
1972	24,798.5	1,380.5	465.1	2,973.0	3,805.2	1,866.5	5,261.1	408.8	2,850.1	3,658.9	2,129.3
1973	27,895.6	1,651.5	620.8	3,397.8	3,885.1	2,189.3	5,813.3	469.2	3,305.0	4,172.2	2,391.4
1974	30,772.6	1,777.9	622.0	3,736.1	4,184.1	2,467.0	6,388.5	714.2	3,755.7	4,569.8	2,557.3
1975	33,012.2	1,757.1	604.2	3,924.9	4,489.4	2,821.2	6,452.5	868.8	4,166.4	5,098.7	2,829.0
1976	37,251.7	1,881.9	599.9	4,343.9	4,818.5	3,119.1	7,969.5	793.6	4,826.7	5,653.0	3,245.6
1977	41,892.1	2,090.5	539.9	5,214.8	5,488.6	3,351.0	8,940.2	970.2	5,454.7	6,223.6	3,618.6
1978	46,980.8	2,390.8	803.1	6,001.2	6,018.0	3,734.1	9,894.8	961.2	6,219.8	6,973.3	3,984.5
1979	51,902.7	2,724.0	847.4	6,635.7	6,458.1	4,121.5	10,600.9	1,185.5	7,287.5	7,740.1	4,302.0
1980	57,073.1	2,763.5	730.7	7,297.4	7,149.3	4,535.3	11,471.8	1,564.8	8,332.8	8,386.4	4,841.1
1981	63,750.7	2,736.7	1,022.8	7,764.5	8,006.0	5,032.8	12,902.8	1,945.6	9,367.6	9,396.9	5,575.0

Sources: Survey of Current Business, Vol. 62, No. 7 (July 1982), p. 79 (Table 6.3B); unpublished tabulations from the U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Wealth Division; Survey of Current Business, Vol. 62, No. 8 (August 1982), p. 68,; unpublished tabulations from the U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division; U.S. Department of Commerce, Bureau of the Census, Annual Survey of Manufactures (selected editions); 1977 Census of Manufactures, Vol. II, Part 1, General Summary, p. 3 and Vol. III, Part 2, p. 47-5; U.S. Department of Agriculture, Economic Research Service, Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1981, pp. 80, 132-9; unpublished revisions and historical cost figures from the U.S. Department of Agriculture, Economic Research Service.

a/ Includes agricultural services, forestry and fisheries, and "rest of the world," which includes operations of foreign governments and international organizations in the United States.

Table 2.
Virginia Gross State Product in Constant Dollars, 1958-1981 (millions of 1972 dollars)

Year	Total	Construction	Farming	Finance, Insurance, and Real Estate	Government, Federal	Government, State and Local	Manufacturing	Mining	Services[a/]	Trade	Transportation and Public Utilities
1958	13,033.8	763.9	511.3	1,406.7	2,832.1	890.0	2,341.3	169.4	1,437.3	1,689.0	992.8
1959	13,822.3	823.9	463.7	1,480.7	2,917.2	912.3	2,602.4	187.4	1,530.1	1,833.9	1,070.7
1960	13,882.7	836.9	496.2	1,531.2	2,766.6	951.5	2,576.1	188.0	1,565.9	1,871.3	1,099.0
1961	14,345.7	903.5	507.0	1,600.4	2,883.1	993.5	2,653.3	185.0	1,600.7	1,912.8	1,106.4
1962	15,225.0	977.5	490.3	1,712.1	2,974.6	1,044.9	2,921.2	195.0	1,695.4	2,056.0	1,158.0
1963	16,146.7	1,083.0	386.4	1,842.9	3,143.0	1,101.0	3,147.6	215.5	1,822.7	2,167.7	1,236.9
1964	17,307.0	1,137.9	524.5	1,947.7	3,272.8	1,193.2	3,439.5	224.2	1,933.8	2,332.7	1,300.7
1965	18,169.0	1,205.6	488.2	2,054.7	3,239.9	1,289.9	3,722.6	226.3	2,013.6	2,519.1	1,409.1
1966	19,095.1	1,169.7	377.7	2,162.5	3,512.2	1,397.1	3,960.6	238.1	2,113.9	2,640.8	1,522.5
1967	19,774.8	1,101.0	482.5	2,229.3	3,806.8	1,444.7	3,972.3	245.9	2,205.5	2,712.9	1,573.9
1968	20,967.5	1,172.6	434.3	2,342.9	3,915.4	1,583.7	4,341.5	269.9	2,304.7	2,903.9	1,698.6
1969	22,181.7	1,149.2	446.5	2,512.0	4,483.9	1,686.7	4,413.6	291.4	2,407.5	3,020.0	1,770.9
1970	22,175.4	1,154.4	452.9	2,566.4	4,056.9	1,751.5	4,320.8	382.7	2,506.8	3,116.3	1,866.7
1971	23,104.6	1,286.4	445.9	2,747.2	4,005.6	1,771.2	4,539.1	383.2	2,607.2	3,353.9	1,964.9
1972	24,798.5	1,380.5	465.1	2,973.0	3,805.2	1,866.5	5,261.1	408.8	2,850.1	3,658.9	2,129.3
1973	26,495.4	1,497.3	390.5	3,257.7	3,682.6	2,038.5	5,795.9	413.8	3,126.8	3,977.3	2,315.0
1974	26,893.2	1,369.7	405.4	3,412.0	3,699.5	2,175.5	5,844.9	426.4	3,314.8	3,915.9	2,329.1
1975	26,374.8	1,214.3	451.8	3,413.0	3,664.8	2,289.9	5,216.2	422.2	3,322.5	4,014.7	2,365.4
1976	28,155.9	1,296.1	448.6	3,546.0	3,620.2	2,345.2	6,163.6	352.9	3,588.6	4,272.9	2,521.8
1977	29,804.1	1,326.5	423.5	3,920.9	3,923.2	2,351.6	6,525.7	399.8	3,822.5	4,461.4	2,649.0
1978	31,220.4	1,375.6	499.4	4,116.0	4,020.0	2,469.6	6,814.6	371.10	4,078.6	4,708.5	2,767.0
1979	32,078.6	1,370.9	458.2	4,248.2	4,038.8	2,564.7	6,906.1	369.8	4,416.7	4,831.5	2,873.7
1980	32,353.9	1,214.7	447.3	4,285.0	4,171.1	2,609.5	6,931.6	358.9	4,611.4	4,792.2	2,932.2
1981	33,146.2	1,118.8	604.9	4,219.8	4,222.6	2,665.7	7,196.2	341.3	4,772.1	4,979.8	3,025.0

Sources: The sources cited in Table 1, plus Table 7.22 in the July 1982 Survey of Current Business; U.S. Department of Agriculture, Crop Reporting Board, Statistical Reporting Service, Agricultural Prices Annual Summary, 1981, pp. 8, 18-21, and earlier annual summaries; U.S. Department of Agriculture, Agricultural Statistics, 1976, p. 457.

a/ Includes agricultural services, forestry and fisheries, and "rest of the world," which includes operations of foreign governments and international organizations in the United States.

Table 3.
Virginia GSP as a Percent of GNP by Industrial Division, 1958-1981 (current dollars)

Year	Total	Construction	Farming	Finance, Insurance, and Real Estate	Government, Federal	Government, State and Local	Manufacturing	Mining	Services[a/]	Trade	Transportation and Public Utilities
1958	1.825	1.812	1.849	1.507	5.665	1.720	1.528	1.333	1.717	1.567	1.916
1959	1.826	1.811	1.718	1.503	5.832	1.693	1.520	1.411	1.729	1.589	1.933
1960	1.798	1.814	1.724	1.493	5.421	1.680	1.499	1.394	1.711	1.594	1.913
1961	1.810	1.936	1.751	1.492	5.518	1.673	1.543	1.365	1.682	1.613	1.886
1962	1.819	2.019	1.732	1.511	5.464	1.710	1.565	1.379	1.701	1.628	1.883
1963	1.850	2.170	1.319	1.577	5.770	1.715	1.557	1.482	1.754	1.653	1.905
1964	1.901	2.182	1.844	1.595	5.933	1.756	1.587	1.481	1.769	1.677	1.909
1965	1.890	2.216	1.615	1.600	5.782	1.796	1.572	1.439	1.766	1.698	1.918
1966	1.879	2.143	1.345	1.615	5.753	1.843	1.554	1.440	1.770	1.689	1.919
1967	1.902	2.062	1.612	1.599	5.810	1.838	1.562	1.467	1.757	1.695	1.929
1968	1.942	2.062	1.496	1.609	5.901	1.918	1.618	1.533	1.771	1.709	1.927
1969	1.993	2.059	1.492	1.643	6.728	1.964	1.592	1.600	1.781	1.740	1.912
1970	2.020	2.160	1.489	1.647	6.377	1.960	1.655	2.022	1.816	1.766	1.968
1971	2.041	2.221	1.382	1.690	6.549	1.910	1.700	2.080	1.846	1.808	2.008
1972	2.091	2.325	1.458	1.751	6.474	1.932	1.799	2.151	1.889	1.834	2.042
1973	2.103	2.490	1.244	1.837	6.449	2.036	1.783	2.157	1.910	1.883	2.093
1974	2.146	2.570	1.303	1.850	6.442	2.096	1.875	2.217	1.959	1.893	2.081
1975	2.131	2.514	1.237	1.816	6.418	2.137	1.802	2.238	2.004	1.915	2.085
1976	2.168	2.455	1.307	1.821	6.325	2.162	1.942	1.847	2.063	1.940	2.127
1977	2.188	2.413	1.115	1.893	6.812	2.140	1.924	2.049	2.066	1.931	2.118
1978	2.171	2.341	1.367	1.891	6.863	2.178	1.908	1.847	2.055	1.925	2.062
1979	2.147	2.354	1.184	1.852	6.915	2.213	1.882	1.775	2.064	1.928	2.053
1980	2.168	2.281	1.118	1.801	7.040	2.209	1.974	1.663	2.097	1.970	2.083
1981	2.170	2.152	1.350	1.732	7.093	2.249	2.004	1.529	2.101	1.988	2.129

Source: Same as Table 1.

a/ Includes agricultural services, forestry and fisheries, and "rest of the world," which includes operations of foreign governments and international organizations in the United States.

Table 4.
Virginia GSP Per Capita and GNP Per Capita, 1958-1981
(current and 1972 dollars)

Year	Current Dollars			1972 Dollars		
	Virginia Per Capita	U.S. Per Capita	Virginia as a % of U.S.	Virginia Per Capita	U.S. Per Capita	Virginia as a % of U.S.
1958	2,096	2,582	81	3,330	3,907	85
1959	2,254	2,755	82	3,498	4,075	86
1960	2,285	2,815	81	3,483	4,097	85
1961	2,319	2,867	81	3,503	4,136	85
1962	2,459	3,043	81	3,642	4,309	85
1963	2,582	3,167	82	3,776	4,418	85
1964	2,782	3,338	83	3,972	4,587	87
1965	2,961	3,572	83	4,119	4,804	86
1966	3,187	3,867	82	4,285	5,038	85
1967	3,374	4,051	83	4,387	5,125	86
1968	3,721	4,382	85	4,600	5,309	87
1969	4,077	4,690	87	4,807	5,403	89
1970	4,302	4,871	88	4,759	5,327	89
1971	4,627	5,210	89	4,861	5,427	90
1972	5,136	5,667	91	5,136	5,667	91
1973	5,685	6,276	91	5,400	5,935	91
1974	6,182	6,723	92	5,402	5,842	92
1975	6,529	7,190	91	5,217	5,716	91
1976	7,257	7,897	92	5,485	5,967	92
1977	8,047	8,729	92	5,725	6,233	92
1978	8,891	9,743	91	5,908	6,477	91
1979	9,747	10,766	91	6,024	6,588	91
1980	10,650	11,591	92	6,037	6,489	93
1981	11,740	12,811	92	6,104	6,553	93

Source: Tables 1 and 2 and unpublished July 1st population estimates from the U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

Tayloe Murphy Institute
DYNAMICS BUILDING - 4th FLOOR
2015 IVY ROAD
CHARLOTTESVILLE, VIRGINIA 22303 - 1780

BULK RATE
U.S. POSTAGE PAID
PERMIT NO. 147
Non-Profit Organization
Charlottesville, Virginia

SRI Acquistions
Congressional Information Service
4520 East-West Highway, Suite 800
Bethesda, Maryland 20814

Address Correction Requested ● Return Postage Guaranteed